

U.S. Department of the Interior Bureau of Land Management

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December 19, 2014

2015 Missouri Breaks Riparian Group Projects (Cottonwood Plantings and Riparian Fences)

Location: Missouri River corridor between Fort Benton and Stafford Ferry



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CHAPTER 1

INTRODUCTION AND NEED FOR THE PROPOSED ACTION

INTRODUCTION

The Missouri Breaks Riparian Group (MBRG) is an organization of entities interested in maintaining the riparian and river resources on public and private land within the Upper Missouri National Wild and Scenic River corridor between Fort Benton and James Kipp Recreation Area. Core members include the Missouri River Conservation Districts Council (MRCDC), the Friends of the Missouri Breaks Monument (Friends), and the Bureau of Land Management (BLM). This group coordinates with Northwestern Energy (formerly Montana – Pennsylvania Power and Light) on project development and funding opportunities. This environmental assessment analyzes the potential impacts of the group's 2015 project proposals as well as likely cottonwood planting sites over the next 5 years.

Through a cooperative funding effort between Northwestern Energy and the BLM, the group proposes to construct two fences to improve livestock grazing management in riparian areas adjacent to the Missouri River. Fence construction would occur on private property owned by ABN Ranch and Bailey (Robert) Ranch. The fences would be constructed through contract with Northwestern Energy with funds provided by Northwestern Energy and the BLM. In addition, the group proposes replacing 130 acres (15 sites) of aging cottonwood forest on public and private land between Fort Benton and Stafford Ferry over the next five years. Funding and materials for initial plantings would be provided by BLM, and Northwestern Energy and the Friends would provide funding and labor to maintain the restoration sites.

PURPOSE AND NEED FOR THE PROPOSED ACTION

Riparian-wetland areas are some of the most productive resources found on public and private lands, and cottonwood forest on the Upper Missouri National Wild and Scenic River is highly prized for its outstanding wildlife, fisheries, recreation, and aesthetic values. Unfortunately, because of numerous man-made and natural causes, limited recruitment of cottonwood forest is occurring, and the current age-class demographic of existing forest is skewed towards old trees approaching the end of their life. If current trends continue, the amount of cottonwood forest on the Upper Missouri will decrease in the future. This effect is particularly evident in the reach of the Upper Missouri from Fort Benton to Stafford Ferry, where very limited recruitment of new forest has occurred in recent years.

The purpose of this project is twofold. One purpose is to replace ageing cottonwood forest on the Upper Missouri River between Fort Benton and Stafford Ferry at feasible sites. The second purpose is to improve livestock grazing management on important

riparian, woodland habitats on public and private lands in the Upper Missouri corridor in partnership between the BLM, private land owners, the Friends, MRCDC, and Northwestern Energy.

CONFORMANCE WITH BLM LAND USE PLAN(S)

The fences would be constructed on private lands, but resource benefits would occur on private and BLM-administered lands. The cottonwood plantings would occur on public and private lands. While portions of the proposed projects would occur on private lands, the expenditure of public funds constitutes a federal action. Therefore, an environmental assessment (EA) is required. A Wyden Amendment justification would be used to document the benefit to public resources from the expenditure of funds for projects that occur on private lands.

The proposed action is in conformance with the UMRBNM Resource Management Plan. “The BLM will maintain and/or improve the riparian-wetland areas based on proper functioning condition (PFC) and the desired plant community. The presence and condition of riparian vegetation will be managed to maintain riparian and wetland function. Riparian-wetland plant species, such as sedges, rushes, and cottonwood/willow on sites capable of supporting woody species, will be managed for age-class and composition diversity and high vigor considering physical site characteristics and natural disturbances history.”

The UMRBNM Resource Management Plan also states “In areas that have potential to support riparian vegetation BLM may restore or establish native riparian vegetation.”

RELATIONSHIPS TO STATUTES, REGULATIONS AND OTHER PLANS

The proposed action is consistent with Montana/Dakotas Standards for Rangeland Health and Guidelines for Livestock Grazing Management including Lewistown District Standards #2, #3, and #5. Standards for Rangeland Health require achieving or making significant progress towards riparian and wetland areas are in proper functioning condition (#2), water quality meeting Montana State standards (#3), and habitats are provided to maintain healthy, productive and diverse populations of native plant and animal species (#5).

IDENTIFICATION OF MANAGEMENT CONCERNS AND/OR ISSUES

The following management concerns and/or issues were identified during internal scoping of the proposed projects.

Recreation, Visuals, and Wild and Scenic Rivers

- The proposed projects are within a National Wild and Scenic River corridor and the Lewis and Clark National Historic Trail. How will the proposed projects affect visuals?

- Recreationists may view the proposed projects as a negative impact to visuals or a proactive approach to addressing a problem. What are the effects to recreation experiences?
- The proposed plantings should include Hole-in-the-Wall recreation site.

Cultural Resources and National Historic Trails

- The proposed projects are within the Lewis and Clark National Historic Trail corridor, and portions of the proposed projects are near or at Lewis and Clark campsites. What are the effects to these features?
- The project area has important cultural significance to Native American tribes and includes the Judith Landing Historic District. What are the effects?

Wildlife Habitat

- Riparian, woodland habitat is important for numerous species of wildlife. Increasing recreational use and disturbance in woodland habitats can displace wildlife and degrade habitat quality. Proposed projects should be designed to minimize recreation use in existing woodland habitats and limit disturbance of existing woodlands.

Invasive Species

- Known weed infestations occur within the Upper Missouri corridor and the proposed project areas. The proposed projects should be designed to minimize the spread of invasive plant species.

CHAPTER 2

DESCRIPTION OF ALTERNATIVES

INTRODUCTION

This EA focuses on the Proposed and No Action alternatives. While the No Action alternative does not meet the purpose and need of the EA, it is considered and analyzed to provide a baseline for comparison of the impacts of the Proposed Action. While the proposed projects would occur on a mixed ownership of private lands and public lands, the expenditure of public funds constitutes a federal action. Therefore, an EA is required. A Wyden Amendment justification is used to document benefit to public resources from the expenditure of funds for projects that occur on private lands.

NO ACTION

The BLM would not partner with Northwestern Energy or the private landowners to construct approximately 1.2 miles of barbed-wire fences to improve livestock grazing management in the Missouri River corridor. The BLM would not replace aging cottonwood forest with plantings.

PROPOSED ACTION

Plantings

During the last two years, the BLM attempted a method to plant trees at high elevations relative to the river and reach the groundwater table by drilling a 7-foot, 8-inch diameter hole with a special auger attachment for a skid-steer. A 10 to 12-foot, 1-inch diameter cottonwood cutting is placed in the hole along with a 7.5-foot PVC pipe that is perforated on the bottom 18 inches. The hole is back filled with a mud slurry and concentration of root-growth hormone. Last, the tree is individually protected from beaver, deer, and livestock with protective fencing.

Figure 1. Skid-steer drilling holes for cottonwood cuttings at Dark Butte in 2014.



The intent of this method is to be able to water the trees through the PVC pipe. The cuttings will sprout roots where the water is, so if they are watered on the land surface, they will sprout roots at the land surface and never reach the water table. This results in mortality as soon as water is no longer available. By providing water at a depth of seven feet, they can grow roots that connect with a permanent water table in a relatively short amount of time. Test plantings at Judith Landing and Dark Butte in 2013 and 2014 have resulted in trees that are able to survive without additional care after one or two years' time.

Figure 2. Volunteer planting a cottonwood cutting (photo courtesy of the Friends).



Cottonwood cuttings would be planted between winter and bud break in the spring (i.e. early April). Please note that cuttings would be taken from sapling-rich locations such as the Judith River or in the Kipp Recreation area, and they would be taken from beaver-cut resprouts to prevent damaging existing replacement stands of cottonwood. Holes would be drilled with BLM skid-steer and auger prior to the trees being planted by a volunteer work force. Roughly 50 to 100 trees would be planted per site depending upon density needed to replace existing forest, assuming some mortality of newly planted trees. The volunteer workforce would fence each tree at the time of planting. Post restoration maintenance would be needed for one to two years post planting by providing water to the trees bi-weekly in April, May, and June, and weekly in July, August, and September.

The proposed planting sites are identified in Figures 3 and 4. A site-scale map of each site is included in Appendix A (Planting Site Maps). Figure 3 displays the relative location of the proposed sites between Fort Benton and Judith Landing.

Figure 3. Upper River Proposed Planting Sites.

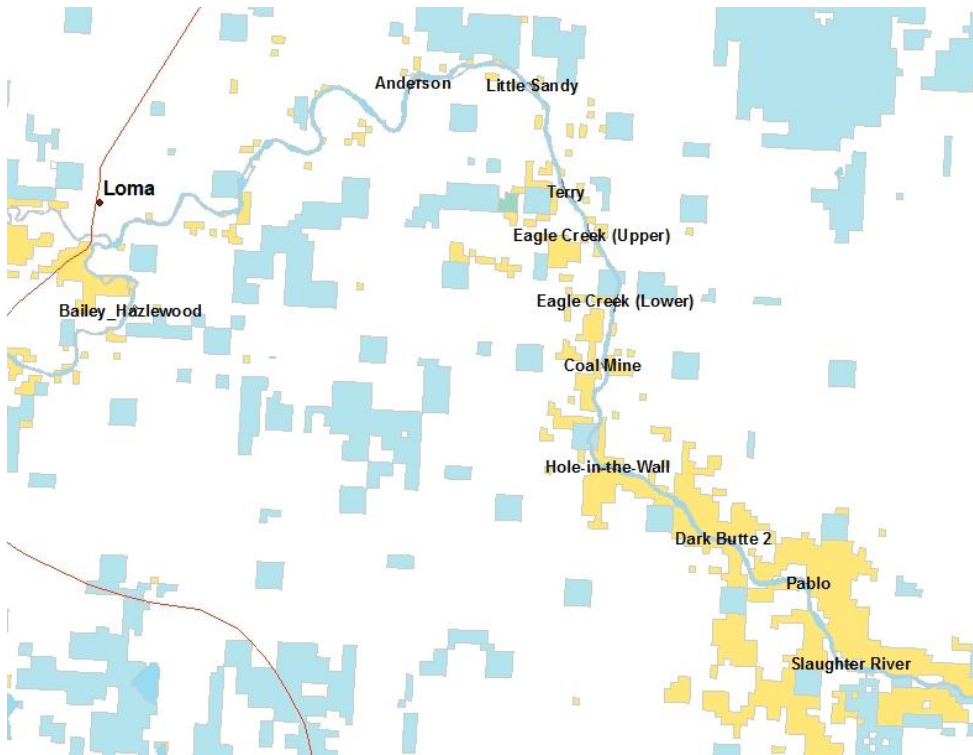


Figure 4 displays the proposed sites between Judith Landing and Stafford Ferry.

Figure 4. Lower River Proposed Planting Sites



The proposed plantings would be completed over the next five years. Table 2.1 identifies the sites, acres treated, and an approximate schedule. The schedule is rough and dependent upon BLM, Northwestern Energy, and the Friends funding availability as well as landowner interest.

Table 2.1. Sites, Acres Treated, and Schedule

Site	Ownership	Acres Treated	Schedule
Dark Butte	BLM	7.5	2015
Anderson	Private	20	2015
Slaughter River	BLM	6	2016
Bailey (Robert)/Hazlewood	Private	14	2016
Hole-in-the-Wall	BLM	10	2016-2019
Eagle Creek (Lower)	Private	8	Dependent upon landowner preference
Little Sandy	BLM	10	2016-2019
Eagle Creek (Upper)	Private	7.5	Dependent upon landowner preference
Pablo	BLM	5.5	2016-2019
Terry	Private	10	Dependent upon landowner preference

Judith Landing	Private/BLM lease	10.5	2016-2019
Boiler Bottom	BLM	1.0	2016-2019
Coal Mine	BLM	2.0	2016-2019
Murray Dugout	BLM	18.4	2016-2019
Holmes Council	BLM	2.9	2016-2019

Fence Projects

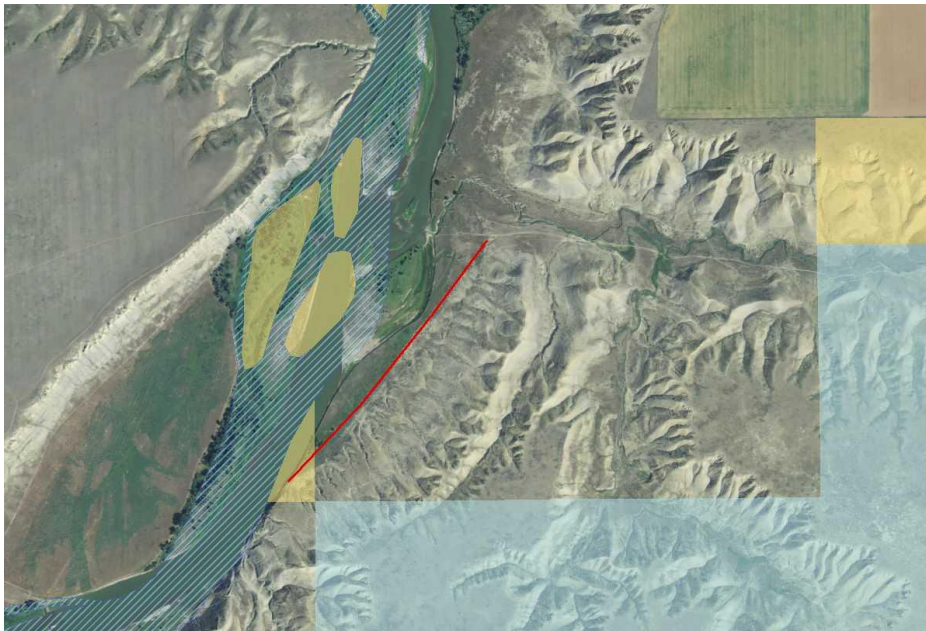
Location of the proposed fencing projects:

- 1) Bailey Fence (T25N R10E section 28)
- 2) Anderson Fence (T26N R12E section 7)

Bailey (Robert) Fence

Approximately 0.6 miles of fence would be constructed (with up to two water gaps) to preclude livestock grazing use on roughly 0.6 miles of Missouri River.

Figure 5. Bailey Fence

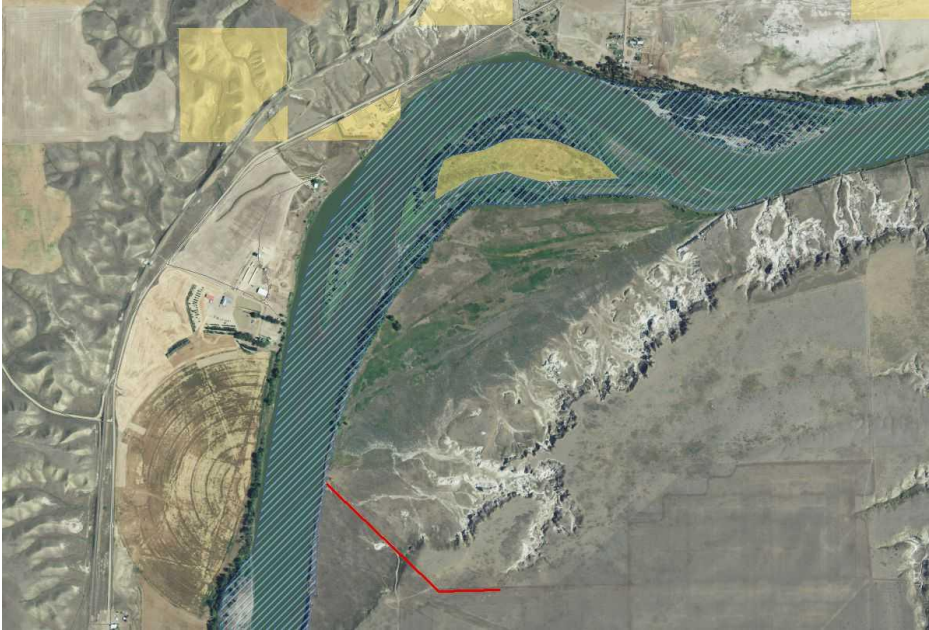


Anderson Fence

Approximately 0.6 miles of fence would be constructed to limit livestock grazing use on approximately 7 miles of Missouri River. This fence would allow the livestock operator to graze in accordance with the grazing program developed with the Undaunted

Stewardship program, which would include limited duration and season of use in riparian areas.

Figure 6. Anderson Fence



REQUIRED DESIGN FEATURES:

- Wildlife fencing stipulations would include a smooth bottom wire that is at least 18” off the ground and a top wire maximum height of 40”.
- To protect vegetation, project activities shall not be performed during periods when the soil is too wet to adequately support equipment/vehicles. If equipment/vehicles create ruts in excess of 3 inches deep, operations must cease as the soil will be deemed too wet to adequately support equipment/vehicles.
- All vehicles and equipment should be thoroughly cleaned to remove weed seed prior to entering the project site.
- Prior to leaving the site, clothing and equipment should be inspected for weed seed (i.e. burs on clothing, downy/Japanese brome seed in socks). If found, the seeds should be removed, bagged and disposed of in a sanitary landfill.
- Do not encourage increased recreation use (i.e. camping) in existing woodland communities and wildlife habitat.

CHAPTER 3

AFFECTED ENVIRONMENT/ENVIRONMENTAL IMPACTS

INTRODUCTION AND GENERAL SETTING

The proposed actions are located in the badlands adjacent to the Upper Missouri National Wild and Scenic River. The badlands consist of sagebrush grasslands, grasslands, and lightly vegetated badlands. Mixed shrub communities are common in woody draws and flats throughout all of these vegetation types. The bottomland includes native forests of cottonwood, green ash, and willow.

CRITICAL ELEMENTS		
Determination*	Resource	Rationale for Determination
NI	Air Quality	Air quality in the project area is excellent and unlikely to be affected by the proposed action.
NP	Areas of Critical Environmental Concern	
PI	Cultural Resources	Discussed under Resource C – Cultural Resources and National Historic Trails
NP	Environmental Justice	
NP	Farmlands (Prime or Unique)	
NI	Floodplains	Discussed under Resource A – Riparian-Wetland/Water Resources
PI	Invasive, Non-native Species	Discussed under Resource F – Invasive Species
PI	Native American Religious Concerns	Discussed under Resource C – Cultural Resources and National Historic Trails
NP	Threatened, Endangered or Candidate Plant or Animal Species	
NP	Wastes (hazardous or solid)	
PI	Water Quality (drinking/ground)	Discussed under Resource A – Riparian-Wetland/Water Resources
PI	Wetlands/Riparian Zones	Discussed under Resource A – Riparian-Wetland/Water Resources
PI	Wild and Scenic Rivers	Discussed under Resource D – Recreation, Visuals, and Wild and Scenic Rivers.
NP	Wilderness	

*Possible determinations:

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present and may be impacted to some degree. Will be analyzed in affected environment and environmental impacts. (NOTE: PI does not mean impacts are likely to be significant in any way).

RESOURCES PRESENT, BUT NOT AFFECTED TO A DEGREE THAT DETAILED ANALYSIS IS REQUIRED

RESOURCE A: Riparian-Wetland/Water Resources

The existing condition of the Missouri River and associated riparian-wetland vegetation on this reach of river is proper functioning condition (PFC). The condition of PFC is in compliance with BLM regulatory standards and is an acceptable condition with Montana Department of Environmental Quality for mitigating nonpoint source pollution impacts to water quality. While the riparian-wetland, floodplain, and river channel have not lost physical function and ability to sustain habitat values above PFC, the purpose of the proposed projects are to maintain and/or enhance riparian values and replace aging cottonwood forest. In summary, under both the No Action and the Proposed Action alternative, riparian-wetland condition and water quality would be maintained and/or enhanced. While there are many cumulative impacts in a watershed the size of the Missouri River, the anticipated direct and indirect impacts of the proposed action are expected to maintain or improve the riparian-wetland, floodplain, and river conditions. Since the direct and indirect impacts would maintain or improve conditions, cumulative impacts would remain the same or improve. Therefore, for the fore mentioned reasons, riparian-wetland and water resources are not carried forward for detailed analysis.

RESOURCE B: Rangeland Vegetation/Livestock Grazing Management

Livestock grazing management would not be impacted (season of use, level of use, AUMs harvested or allocated, etc.). The BLM parcels within the area of potential affect due to the proposed fences are categorized as custodial allotments, which are typically small, scattered, isolated parcels of BLM land. This means that they can be used at the permittee's discretion in conjunction with their normal operation. The proposed action would not change the terms and conditions of the grazing permit; however, vegetation condition along the Missouri River (riparian communities) would benefit from better livestock control/management after fences are constructed.

Vegetation disturbance on public land as a result of tree plantings would be negligible and would not require any type of reclamation. The trees would be individually fenced from wildlife/livestock, so changes in forage availability would be negligible. Therefore, livestock grazing management and rangeland vegetation are not carried forward for detailed analysis.

RESOURCES CARRIED FORWARD FOR ANALYSIS

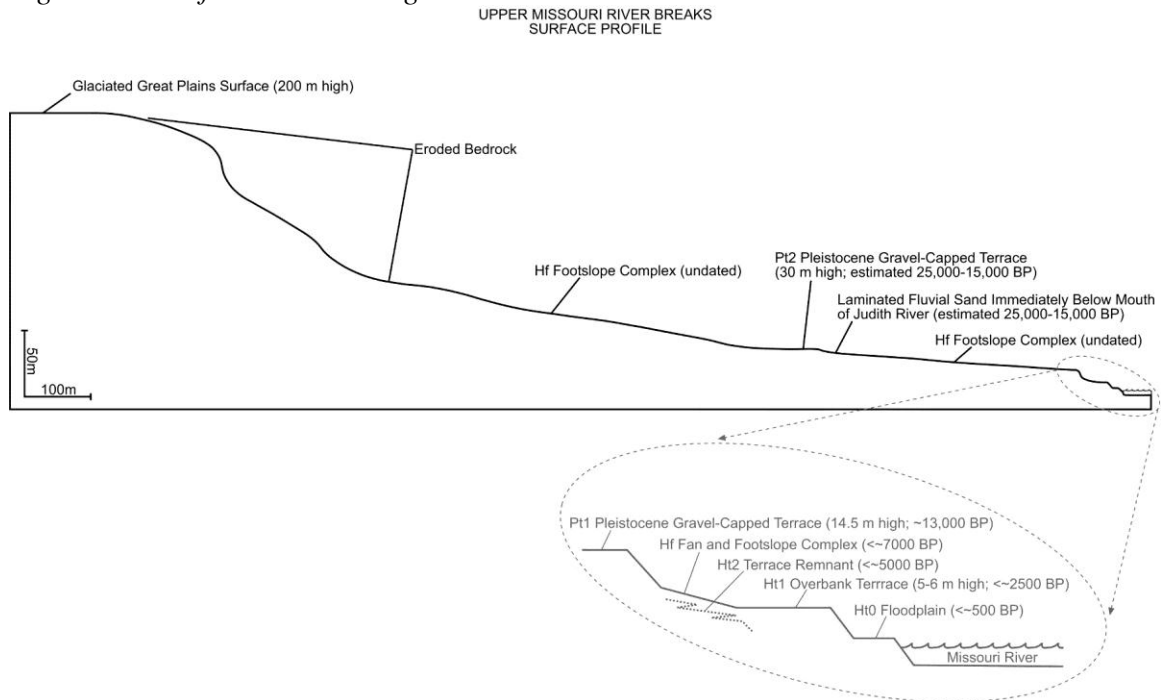
RESOURCE C: Cultural Resources and National Historic Trails

For an overview of cultural resources in the general project area please refer to the *Class I Overview of the BLM Central Montana District* (Walker-Kuntz 2010). Generally, documented sites along the Missouri River tend to be associated with Lewis & Clark's

journeys in 1805-1806, or lithic sites associated with Indian tribes. Many of these have not been preserved on the surface but are several feet below the current ground level, covered by erosion deposits. Flooding and ice tend to erase Euro-American sites (i.e. homestead, steamboat) from the floodplain and the cottonwood stands. The historic record that is still present tends to be further away from the river's edge.

In 2004 Steve Aaberg and William Eckerle completed a geoarchaeological assessment of the Upper Missouri River, documenting the relationship between archaeological sites and landforms (Eckerle, etal: 2006). The majority of the archaeological sites documented in the Upper Missouri River Breaks have been recorded in the Hf Fan and Footslope Complex and the Ht1Terrace (referred to as the Overbank or Alluvial Terrace).

Figure 5. Landform/Archaeological Site Relation



The National Park Service has identified this portion of the Lewis & Clark National Historic Trail as a High Potential Route Segment, meaning it affords a high-quality recreation experience in a portion of the route having greater than average scenic values or affording an opportunity to vicariously share the experience of the original users of the route (BLM Manual 6250). On May 30, 1805, Meriwether Lewis recorded the Corps' experience at what is now Pablo Island:

this day we proceded with more labour and difficulty than we have yet experienced; in addition to the imbarasments of the rappid courant, riffles, & rockey point which were as bad if not worse than yesterday, the banks and sides of the bluff were more steep than usual and were now rendered so slippery by the late rain that the men could scarcely walk. the chord is our only dependance for the courant is too rappid to be resisted with the oar and the river too deep in most places for the pole. the earth and stone also falling from these immense high bluffs render it dangerous to pass under them. the wind was

also hard and against us. our chords broke several times today but happily without injury to the vessels. we had slight showers of rain through the course of the day, the air was could and rendered more disagreeable by the rain. one of the party ascended the river hills and reported on his return that there was snow intermixed with the rain which fell on the hights; he also informed us that the country was level (and untimbered) a little back from the river on both sides. there is now no timber on the hills, an only a few scattering cottonwood, ash, box Alder and willows to be seen along the river. in the course of the day we passed several old encampment of Indians, from the apparent dates of which we conceived that they were the several encampments of a band of about 100 lodges who were progressing slowly up the river; the most recent appeared to have been evacuated about 5 weeks since. these we supposed to be the Minetares or black foot Indians who inhabit the country watered by the Suskashawan and who resort to the establishment of Fort de Prarie, no part of the Missouri from the Minetaries to this place furnishes a perminent residence for any nation yet there is no part of it but what exhibits appearances of being occasionally visited by some nation on hunting excursions. The Minnetares of the Missouri we know extend their excursions on the S. [NB: south] side as high as the yellowstone river; the Assinniboins still higher on the N. side most probably as high as about Porcupine river and from thence upwards most probably as far as the mountains by the Minetares of Fort de Prarie and the Black Foot Indians who inhabit the S. fork of the Suskashawan.

Ordway added: “we Camped in a handsome grove of cotton trees on the Stard. Side.”

Their description coordinates with the area proposed for cottonwood plantings at the Pablo Island site.

Table 3.1 Historic Properties

Planting Area	Historic Properties within the Area of Potential Effect	National Register Eligibility	Within planting area	Within access route
Dark Butte	--		--	--
Anderson	--		--	--
Slaughter River	24CH0074	Undetermined	--	Yes
Bailey/Hazlewood	--		--	--
Hole-in-the-Wall	--		--	--
Eagle Creek (Lower)	24CH0669 24CH0665	Undetermined Unresolved	Yes	Yes
Little Sandy	24CH0015, 24CH0018, 24CH0211, 24CH0010, 24CH1368, 24CH0218	Undetermined Undetermined Undetermined Undetermined Ineligible Unresolved	Yes	Yes
Eagle Creek (Upper)	24CH0665, 24CH0669,	Unresolved Undetermined	Yes	Yes
Pablo	24CH1088 24CH1089	Undetermined Ineligible	--	Yes

Planting Area	Historic Properties within the Area of Potential Effect	National Register Eligibility	Within planting area	Within access route
Terry	--		--	--
Judith Landing	24CH0331 24CH0322 24CH0324	NR Listed Undetermined Undetermined	Yes	Yes
Coal Mine	24CH1371	Undetermined	--	Yes
Murray Dugout	--		--	--
Holmes Council	24FR0186 24FR1178 24FR1179	Undetermined Undetermined Undetermined	--	Yes
Boiler Bottom	24BL0071 24BL0072 24BL0074	Undetermined Undetermined Eligible	--	Yes

RESOURCE C: Cultural Resources and National Historic Trails

NO ACTION

No historic properties or National Historic trails would be affected by selecting this alternative.

PROPOSED ACTION

Direct and Indirect Impacts of the Proposed Action

Activities associated with this alternative include cottonwood harvesting, planting site access, drilling holes for planting, fencing individual trees, and installing livestock fences. We have no known historic properties in the area of potential effects of the livestock fences. Since the cottonwood “harvest” is accomplished by removing sprouts from existing trees there is no ground disturbance associated with it, and no historic properties affected.

In 2013 cottonwood trees were planted at Judith Landing, and the backdirt from all of the holes was screened for evidence of cultural deposits. The examination yielded no cultural material and no stratification. The areas identified for tree planting are in the same zone along the river, and similar results are anticipated. Areas of potential effect are within cultural site boundaries at Eagle Creek (Lower), Little Sandy, Eagle Creek (Upper), and Judith Landing. Boundaries tend to go to geographic feature; these typically go to river’s edge. Based on the analysis in 2013 at Judith Landing, the proposed planting areas are sediment laden and have removed, modified, or encapsulated the cultural layer with river deposits as well as deposition from sheet erosion. Planting activity is not expected to impact documented sites in Judith Landing planting areas. Based on the analysis completed by Eckerle and Aaberg (2006), there is the potential for archaeological remains in the planting area at Little Sandy and Eagle Creek. Due to the depth of the sites based on the exposures along eroded faces and cutbanks, evidence of

effects would not be known until the time the holes were actually dug. Site monitoring during auger work would be necessary to determine site presence and effect so that excavation could be halted if cultural material surfaced.

Access routes to the planting sites cross through nine documented historic properties/archaeological sites. Since no road construction or maintenance is proposed as part of this action, and access is limited to existing routes, no effect to historic properties is anticipated.

The Lewis & Clark National Historic Trail is adjacent to all of the planting areas, and includes them when looking at the trail corridor. Lewis & Clark's journal entries are filled with references to the vegetation, and as noted above specifically reference cottonwood stands. Restoring the vegetative component to the landscape within the trail corridor with native vegetation will not adversely affect the integrity of the Lewis & Clark National Historic Trail, and preserves the qualities that helped identify this portion of the trail a High Potential Route Segment.

Cumulative Impacts of the Proposed Action

Assuming tree survival, bank stabilization and reduced site erosion could be anticipated results from this project. Established cottonwood stands could serve as camping attractants, leading to concentrated human and livestock use as recreationists and cattle seek shade. Increased soil compaction and possibly artifact hunting could occur in areas where plantings are in or are in close proximity to archaeological sites.

RESOURCE D: Recreation, Visuals, and Wild and Scenic Rivers

NO ACTION

The recreation, Visual Resource Management (VRM) and Wild and Scenic Rivers impacts would remain the same under this alternative. A proactive approach to mitigating the loss of existing cottonwood galleries would not be attempted and could prove detrimental to the future recreational opportunities along the river corridor. There would be no change to the current view shed within the area of the proposed action, thus no impact other than further, potential degradation of visual enhancement within the riparian areas.

PROPOSED ACTION

Direct and Indirect Impacts of the Proposed Action

Recreation: From a recreational perspective the affected area lies along the Upper Missouri National Wild and Scenic River (UMNWSR) and is best defined when using the Upper Missouri River Breaks National Monument Boaters Guide, Volume 1 and 2, highlighting the sections from Fort Benton downstream to Judith Landing (Volume 1) and Judith Landing downstream to Kipp Recreation Area (Volume 2). The information

in much of these guides are keyed to features by “river miles” which is the distance along the river traveling downstream (generally west to east) from Fort Benton, Montana (River Mile 0). Features along the river are identified and discussed in the text by “river mile” left or right (L or R) and enable users to quickly locate specific river sections of the UMNWSR. Using the aforementioned boater’s guides one can pinpoint the proposed sites using Table 2.2.

Table 3.2. Sites, River Mile, VRM Class and WSR Classification

Site	River Mile	VRM Class	WSR Classification
Bailey/Hazlewood Fence	17-17.6R	Class II	Recreational
Bailey/Hazlewood Plantings	17.4-17.7R	Class II	Recreational
Anderson Fence	40.5R	Class II	Recreational
Anderson Plantings	40.5-42.2R	Class II	Recreational
Little Sandy Plantings	46.5-46.9L	Class II	Recreational
Terry Plantings	50.5-51.5L	Class II	Recreational
Eagle Creek Plantings (Upper)	52.5-53.5L	Class I	Wild
Eagle Creek Plantings (Lower)	55.7-56.5L	Class I	Wild
Hole-in-the-Wall Plantings	62.8-63.8R	Class I	Wild
Dark Butte Plantings	67.7-69L	Class I	Wild
Pablo Plantings	72.8L	Class I	Wild
Slaughter River Plantings	76.8L	Class I	Wild
Judith Landing Plantings	88.5L	Class I	Recreational
Boiler Bottom Plantings	101L	Class II	Scenic

Visitor use on the river is recorded with reasonable accuracy from May thru October using self-registration and face to face contact from BLM staff at specific launch points within the river corridor. Recreational use along the Upper Missouri National Wild and Scenic River (UMNWSR) from 2003 – 2014 indicates a total of 56,317 registered visitors engaged in boating activity on the Upper Missouri with 45,054 of that number, approximately 80% reporting use in the area between Fort Benton and Judith Landing, the primary section of river impacted by this action. Further deduction of this use indicates that during the timeframe of the proposed tree planting portion (early April), 327 or 0.7% of users traversed this area with the majority of those being day use fishing activity in recreational sections of the river from Fort Benton downstream to Coal Banks Landing and within the 8 mile recreational section upstream and downstream of Judith Landing Recreation Area. It should also be noted that visitor use documented prior to May of each year is dependent on self-registration of boaters at all launch points and actual use numbers may be skewed. However, it is also safe to say that use is weather and river condition dependent for any given year and portions of the river to include the affected area may be inaccessible for any activity during the proposed period of work. Recreational impacts from tree plantings will be minimal to non-existent during the proposed work period. Both fencing projects will be completed on private property and

not accessible to the recreating public without landowners consent, thus, recreational impact will be non-existent.

Visual Resource Management (VRM): The proposed action lies within VRM Class I and Class II classifications. The objective of VRM Class I is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude limited management activity. The object of VRM Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Public land within the impacted areas is assigned a VRM class based on a process that utilizes scenic quality and sensitivity to changes in the landscape contingent upon the distance zone from which a project or proposal would be seen by the casual observer. See table 2.2 for respective VRM classifications at sites for this proposed action. Construction of additional fencing at the Bailey/Hazlewood and Anderson sites could impair the scenic value if visible from the river corridor, however, the proposed fences will lie entirely within private land. From a visual perspective, minimizing livestock impacts to riparian areas may enhance the visitors' perception of recreating in a more natural environment and enhance the scenic value of the area for many recreationalists.

Cottonwood plantings will temporarily impact the view shed during the initial planting phase with logistical efforts (mechanical equipment, staff, equipment, etc.) visible for short periods to include any surface or vegetative disturbances created by the equipment. Upon completion of the planting the posts, tubing and protective fencing erected around individual trees will be visible at every location and may temporarily detract from the visual quality of selected areas, especially those visible from the river and frequented by visitors for camping, hiking and other recreational activities.

Wild and Scenic Rivers: The UMNWSR is unique in certain aspects of boundary designation because the entire river does not fall under the normal regulatory requirements of the Wild and Scenic Rivers Act that directs boundaries (in wild sections) would not exceed ¼ mile on each side of the river. When the Upper Missouri was added to the national system, Public Law 94-486 amended the act and required the BLM “where necessary to provide a rim to rim corridor” and to determine which of the three national wild and scenic river classifications best fit portions of the river. Because the UMNWSR contains shoreline resources that far exceeded the ¼ mile limitation the boundary was adjusted to accommodate these factors. There are two exceptions to the rim-to-rim boundary; between Fort Benton and Coal Banks Landing and within the Charles M. Russell Wildlife Refuge where BLM management is restricted to bank to bank. In light of this, it should be noted that the fencing action proposals at the Baily/Hazlewood Site and the Anderson Site are not within the UMNWSR boundary. However the tree planting proposals for both sites include portions that appear within the boundary. Areas impacted by the action within the UMNWSR corridor are located within all three classifications of the Wild and Scenic Rivers Act, to include Wild, Scenic and Recreational segments. Wild sections are defined as “those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shoreline essentially primitive and water unpolluted. These represent vestiges of

primitive America”. Scenic sections are defined as “Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and undeveloped, but accessible in places by roads”. Recreational sections are defined as “Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines and that may have undergone some impoundment or diversion in the past”. See table 2.2 for site specific classifications. The proposed action is in direct compliance with general management actions outlined within Part 3 of the Upper Missouri National Wild and Scenic River Management Plan Update [February 1993] wherein specific actions relating to vegetation include the planting of native trees in selected areas to enhance riparian and/or recreational areas. Additionally, the plan emphasizes management strategies to maintain or establish riparian habitat may include establishing riparian pastures, temporary or permanent river corridor fencing and other methods.

Cumulative Impacts of the Proposed Action

Recreation: Long term impacts of this action from a recreational viewpoint are seen as highly beneficial to visitors and far outweigh the temporary, minimal impacts visitors may encounter upon the initial implementation of the project. Reduced grazing in site specific riparian zones, enhanced permittee compliance with grazing plans and increased introduction of native cottonwoods all provide noteworthy and desired outcomes for the river corridor. For the majority of visitors recreating along the UMNWSR overnight camping is an expected activity for any multi-day trip with existing riparian areas much sought after by recreational users for camping due to shade, fuel and potential opportunities for hiking, hunting, fishing and sightseeing. During the summer boating season normal weather patterns typically present warm, dry conditions compelling many visitors to seek areas where “shade” is one of the most sought after natural amenities. As stated earlier in the purpose and need statement the existing cottonwood galleries are in a state of decline with current trends indicating further degradation of the resource. The enhancement of existing recreation/riparian areas or potential creation of riparian areas where none currently exist will provide expanded opportunities for future generations of visitors. Educating the public with newsletters, interpretive publications, signs and face to face briefings at river launch points on the concept, execution and anticipated results of the action will provide reasonable mitigation. To date feedback and comments from the recreational community to include visitors (at launch and take out points), commercial outfitters, Central Montana Resource Advisory Council members, Friends Groups members and volunteers regarding the test site plantings at Judith Landing and Dark Butte have been overwhelmingly positive. Required periodic watering of the individual tree planting sites until desired maturation is evident and no longer required will be conducted via the river corridor by Park (River) Rangers or volunteers with minimal impact. In addition, the creation of newly established riparian areas may for future generations provide alternate recreational opportunities that would permit resource specialists to manage visitor use within Limits of Acceptable Change. Current high use areas such as designated campgrounds could be managed for periodic to permanent closure once alternative sites reach desired levels of maturity for recreational use.

VRM: From a visual perspective the initial phase of the proposed action will require monitoring to ensure any surface or vegetative disturbances created is restored to the natural characteristic of the existing landscape. Medium term visual impacts will be encountered at the planting sites regarding the protective fences erected around individual trees to inhibit grazing by wildlife, livestock and cutting by beavers. These fences when grouped in close proximity to each other in confined recreational/riparian areas may convey an unwanted visual aspect of “man-made” structures by some visitors. Consider using materials (posts, protective fencing, tubing) of neutral earth tone colors that will blend in with the surrounding terrain versus standard green/white tip posts and galvanized fencing that is highly visible. Visitors may come to the understanding or deduce that future gains of the scenic quality associated with functional Missouri River riparian areas and shaded campgrounds far outweigh the temporary impacts foreseen over the next decade. Once the tree plantings attain an acceptable size no longer requiring the fence, these visual distractions could be removed and replaced with a less visually intrusive form of protection such as earhtone or green colored chicken wire. Educating the public with newsletters, interpretive publications, signs and face to face briefings at river launch points on the concept, execution and anticipated results of the action will provide reasonable mitigation.

WSR: The proposed action is in direct compliance and supports the general management actions outlined within Part 3 of the Upper Missouri National Wild and Scenic River Management Plan Update [February 1993] wherein specific actions relating to vegetation include the planting of native trees in selected areas to enhance riparian and/or recreational areas. Additionally, the plan emphasizes management strategies to maintain or establish riparian habitat may include establishing riparian pastures, temporary or permanent river corridor fencing and other methods.

RESOURCE E: Wildlife Habitat

Wildlife and Special Status Species: The project area includes habitat for many species common to the Missouri River floodplain, river breaks and sagebrush grasslands adjacent to the breaks. The proposed project crosses habitat for mule and white-tail deer, elk, and big horn sheep, sharp-tailed grouse, various rodents and furbearers, various hawks, owls, bald and golden eagles, various migratory birds, common reptiles and amphibians. For a complete list of species, see UMRBNM Resource Management Plan (RMP) 2008.

Pallid sturgeons (Endangered) occupy the Missouri River. The Pallid Sturgeon Recovery Area includes the lower $\frac{3}{4}$ of the project area. Pallid sturgeon will not be affected by any alternatives or individual sites within the proposed project. There are no other known T&E species near or on these locations or designated critical habitat or forage species.

The greater short-horned lizard(BLM Designated Sensitive Species, SS) occupies open sagebrush and grassland habitat and is likely present within the project area. Spiny soft-shelled turtle(SS) and northern leopard frog(SS) both occupy river front riparian or gravel areas within the project area, and could be impacted by bringing recreational users to areas currently utilized by these species. Milk snakes (SS) have been observed near some

of the project sites, but prefer drier sites up and away from the riparian zone. While all bats are currently of management concern and many feed and roost along the Upper Missouri, Townsend's Big-eared, and Fringed myotis (both SS), may roost in mature tree cavities or under tree bark. Most BLM Designated Sensitive Species (IM No. MT-2014-067) have no suitable habitat within the project area or if adjacent to the project area will not be impacted from any of the alternatives. These species are not considered to be part of the affected environment. The remaining Sensitive Species within the project area are covered under Migratory Birds.

Migratory Birds: Bald and golden eagles (SS) nest along the Missouri River. All of the project area is foraging habitat, and if not already, could be nesting habitat in the future. These areas are used by numerous other raptors, including osprey, red-tailed hawk, great horned owl, prairie and occasionally peregrine falcons, and Cooper's hawks. Raptor nests have been documented within the analysis area that could be affected by any of the proposed sites. Great blue herons are a colonial nester, which utilizes both the Marias and Missouri River cottonwood galleries. Due to the importance of suitable colony sites, these locations are treated like raptor nests, with similar avoidance protections. The cottonwood and deciduous woody communities are the single most important habitat type for the largest number of migratory species which nest and migrate through Montana. Other migratory bird species present in this area are locally abundant and the habitat is not considered crucial to any species.

Fisheries: While there is fisheries habitat in the Missouri and Judith Rivers adjacent to the project sites, no fisheries habitat or sensitive fish species will be affected by the proposed project. Pallid sturgeon (Endangered) are present in the Missouri River. There will be No Affect to this species or its habitat from any of the proposed alternatives.

NO ACTION

Wildlife and Special Status Species: Pallid sturgeon will not be affected by any alternatives or individual sites within the proposed project. There are no other known T&E species near or on these locations or designated critical habitat or forage species.

The greater short-horned lizard (BLM Designated Sensitive Species, SS) occupies open sagebrush and grassland habitat and is likely present within the project area. Spiny soft-shelled turtle (SS) and northern leopard frog (SS) both occupy river front riparian or gravel areas within the project area, and could be impacted by bringing recreational users to areas currently utilized by these species. Milk snakes (SS) have been observed near some of the project sites, but prefer drier sites up and away from the riparian zone. While all bats are currently of management concern and many feed and roost along the Upper Missouri, Townsend's Big-eared and Fringed myotis (both SS), may roost in mature tree cavities or under tree bark. Most BLM Designated Sensitive Species (IM No. MT-2004-82) have no suitable habitat within the project area or if adjacent to the project area will not be impacted from any of the alternatives. These species are not considered to be part of the affected environment. The remaining Sensitive Species within the project area are covered under Migratory Birds.

Migratory Birds: Bald and golden eagles (SS) nest along the Missouri River. All of the project area is foraging habitat, and if not already, could be nesting habitat in the future. These areas are used by numerous other raptors, including osprey, red-tailed hawk, great horned owl, prairie and occasionally peregrine falcons, and Cooper's hawks. Raptor nests have been documented within the analysis area that could be affected by any of the proposed sites. Great blue herons are a colonial nester, which utilizes both the Marias and Missouri River cottonwood galleries. Due to the importance of suitable colony sites, these locations are treated like raptor nests, with similar avoidance protections. The cottonwood and deciduous woody communities are the single most important habitat type for the largest number of migratory species which nest and migrate through Montana. Other migratory bird species present in this area are locally abundant and the habitat is not considered crucial to any species.

Fisheries: There will be no impact to fisheries by this action.

PROPOSED ACTION

Direct and Indirect Impacts of the Proposed Action

Wildlife and Special Status Species: Pallid sturgeon will not be affected by any alternatives or individual sites within the proposed project. There are no other known T&E species near or on these locations or designated critical habitat or forage species.

The greater short-horned lizard (BLM Designated Sensitive Species, SS) occupies open sagebrush and grassland habitat and is likely present within the project area. It is most likely to be impacted through direct mortality by vehicles, accessing across drier upland habitat to access the project sites. Due to early timing of planned action, cool weather could keep this species away from roads or trails where mortality could occur.

Spiny soft-shelled turtle(SS) and northern leopard frog(SS) both occupy river front riparian or gravel areas within the project area, and could be impacted by bringing recreational users to areas currently utilized by these species. The turtle is especially sensitive to disturbance by people and will abandon shoreline used for basking or even egg laying if it detects presence of people.

Townsend's Big-eared and Fringed myotis (both SS), may roost in mature tree cavities or under tree bark. Planting additional trees which may be in place 50-100 years, will provide long term habitat opportunities for these species. If additional trees bring additional recreational use to areas with existing mature cottonwoods, these species may abandon roost sites for areas with fewer disturbance. Most BLM Designated Sensitive Species (IM No. MT-2014-067) have no suitable habitat within the project area or if adjacent to the project area will not be impacted from any of the alternatives. These species are not considered to be part of the affected environment. The remaining Sensitive Species within the project area are covered under Migratory Birds.

Migratory Birds: Bald and golden eagles (SS) nest along the Missouri River. All of the project area is foraging habitat, and if not already, could be nesting habitat in the

future. Due to early spring nesting of these species, there is potential to disturb adults on the nests, possibly causing abandonment. These areas are used by numerous other raptors, including osprey, red-tailed hawk, great horned owl, prairie and occasionally peregrine falcons, and Cooper's hawks. Raptor nests have been documented within the analysis area that could be affected by any of the proposed sites. Great blue herons are a colonial nester, which utilizes both the Marias and Missouri River cottonwood galleries. Due to the importance of suitable colony sites, these locations are treated like raptor nests, with similar avoidance protections. The cottonwood and deciduous woody communities are the single most important habitat type for the largest number of migratory species which nest and migrate through Montana. Planting additional cottonwoods which may be in place 50-100 years, will provide long term nesting habitat opportunities for many of these species.

Fisheries: There will be no impact to fisheries by the proposed action.

Cumulative Impacts of the Proposed Action

The long term impacts of planting additional trees along the Missouri River are beneficial to the wildlife species present and which migrate through the area. As the trees mature they will bring additional birds to the sites, which will in turn drop seeds from fruit bearing shrubs, potentially jump starting a new understory community which can benefit even more species. The trees when mature, offer two methods of improving habitat for many wildlife species. They can benefit species by directly providing a very important but limited habitat, or potentially moving recreationists from important natural tree stands. These older and decadent trees provide the greatest benefit to many species of raptors, including eagle, bats, and cavity nesting migratory birds.

RESOURCE F: Invasive Species

Noxious and invasive plants are commonplace along the river corridor and exist in every site proposed for fencing and/or planting in this document. In many sites, there are historical and current efforts to contain infestations using herbicides.

Table 3.3. Invasive Plants Present

Planting Area	Invasive Plants Present w/in the Area of Potential Effect	Infestation Density (High, Med, Low)	History of Herbicide Application	Herbicide(s) Used
Dark Butte	Leafy spurge, Russian knapweed, spotted knapweed, Canada thistle, Perennial pepperweed, Russian olive	Med	Yes	Picloram, clopyralid, 2,4-D, metsulfuron methyl
Anderson	Spotted knapweed, leafy spurge, houndstongue, hoary alyssum, perennial pepperweed, Canada thistle, scentless chamomile	High	Unknown	
Slaughter River	Leafy spurge, Russian knapweed, Canada thistle, Russian olive	Low	Yes	Picloram, 2,4-D, triclopyr
Bailey/Hazlewood	Leafy spurge, Russian knapweed, spotted knapweed, Canada thistle, Perennial pepperweed, Russian olive, houndstongue, poison hemlock, scentless chamomile	Med	Unknown	
Hole-in-the-Wall	Leafy spurge, Russian knapweed, spotted knapweed, salt cedar, Russian olive, Canada thistle, Dalmatian toadflax*	High	Yes	Picloram, 2,4-D, triclopyr, metsulfuron methyl, imazapyr, clopyralid
Eagle Creek (Lower)	Leafy spurge, Russian knapweed, spotted knapweed, Canada thistle, purple loosestrife*	Low	Yes	Picloram, 2,4-D
Little Sandy	Leafy spurge, Russian knapweed, spotted knapweed, Canada thistle, perennial pepperweed	Med	Yes	Picloram, clopyralid, 2,4-D, metsulfuron methyl, imazapyr,
Eagle Creek (Upper)	Leafy spurge, Russian knapweed, spotted knapweed, Canada thistle, purple loosestrife*	Low	Yes	Picloram, 2,4-D
Pablo	Leafy spurge, Russian knapweed, spotted knapweed, Canada thistle, perennial pepperweed	Med	Yes	Picloram, clopyralid, 2,4-D, metsulfuron methyl
Terry	Leafy spurge, Russian knapweed, spotted knapweed, Canada thistle, Russian olive	Med	Unknown	
Judith Landing	Leafy spurge, Russian knapweed, spotted knapweed, Canada thistle, Russian olive	Low	Yes	Picloram, clopyralid, 2,4-D, triclopyr
Coal Mine	Russian knapweed	Med	No	
Pablo Island	Leafy spurge, Russian knapweed, spotted knapweed	High	No	
Murray Dugout	Leafy spurge, Russian knapweed, Canada thistle	Low	Yes	Picloram, 2,4-D
Holmes Council	Leafy spurge, Russian knapweed, Canada thistle, salt cedar	Med	Yes	Picloram, 2,4-D
Hagadone	Leafy spurge, Russian knapweed, Canada thistle	Med	No	
Boiler Bottom	Leafy spurge, Russian knapweed, Canada thistle	Med	Yes	Picloram, 2,4-D
Sheepshed	Leafy spurge, Russian knapweed, Canada thistle	Med	No	

NO ACTION

There would be no direct effect from this alternative. Invasive species would continue to persist and be managed according to the priorities outlined in the Upper Missouri River Breaks Weed Management Plan.

PROPOSED ACTION

Direct and Indirect Impacts of the Proposed Action

Noxious and invasive plants will persist in these areas. The first concern is the dispersal of weed seeds to un-infested areas from activities being conducted in the proposed action. These concerns can be mitigated by cleaning vehicles and equipment before, in between, and after entering the individual sites.

Sites where infestation levels are high may impede both the goal of establishing cottonwoods, and managing the invasive plants in that site. The process of planting the trees at that depth should insulate them from herbicide applications so long as herbicides do not contact the above ground foliage. However, residual amounts of herbicide may be present in the soil at some sites and introduced to the lower layers by the drilling process. Herbicide treatments near the plantings may also present risk through offsite herbicide movement from precipitation or volunteer watering practices. If the plantings are successful, herbicide applications will be eliminated from use as trees develop a canopy or drip line. This would impede actions to contain and reduce invasive plant populations.

The Hole in the Wall site is not currently suitable for the proposed plantings as the area identified is almost entirely dominated by perennial invasive plants. The Pablo Island may also be unsuitable due to its proximity to highly invaded areas and would need to be evaluated prior to planting. It is possible that these sites could be made more suitable if planting is delayed and aggressive management of the invasive plants is implemented. However, soils, proximity to surface water, and the potential for residual herbicide may be issues effecting success.

Cumulative Impacts of the Proposed Action

The proposed action limits or removes the ability to use herbicides at every site. Seven of these sites are actively managed to some level. Other options may need to be developed to contain invasive species should this project be successful. Herbicides are used because other options have already been limited. Biological control insects are available and have been released and established along the river corridor for several species since the 1990s. However, for unknown reasons, they seem to have little effect on target plant populations. Grazing is limited for livestock due to season of use restrictions to avoid damage to riparian vegetation and conflicts with recreation. The use of sheep/goats, which is a proven method of long term invasive plant suppression, is prohibited due to conflicts with the resident big horn sheep population. Manual removal is only effective for a few species and is highly labor intensive.

CHAPTER 4

PERSONS, GROUPS, AND AGENCIES CONSULTED

During preparation of the EA, the public was notified of the proposed action through a posting on the Upper Missouri River Breaks National Monument NEPA Register on 12/1/2014. A public comment period was offered between February 13, 2015 and March 13, 2015.

Table 4.1. List of Persons, Agencies and Organizations Consulted

Name/Agency	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Rob Hazelwood	Northwestern Energy	
Steve Leathe	Northwestern Energy	
Robert and Casey Bailey	Landowner (Fence/Planting)	
ABN Ranch	Landowner (Fence/Planting)	
Glenn Terry	Landowner (Planting)	
Dana Darlington	Landowner (Planting)	
Anne Tews	Fisheries Biologist – Montana FWP	
Greg Kruzich	Bureau of Reclamation	
Beth Kampschror	Friends of the Missouri Breaks Monument	
Rachel Frost	Missouri River Conservation Districts Council	
Lewis and Clark National Historic Trail	National Park Service	
John Murray	Blackfeet Tribe	
Josh Osher	Western Watersheds Project	
Rolling Plains, LLLP c/o Dan Bauste (White Rock)	Grazing Permittee	
Merle Olson (White Rock)	Grazing Permittee	
Kenneth Darlington (Piedras)	Grazing Permittee	
Homestead Acres Inc. (Hole in the Wall)	Grazing Permittee	
Gasvoda Brothers Livestock, LLC (Dark Butte)	Grazing Permittee	
Lawrence and Ella Jappe (Pablo Rapids)	Grazing Permittee	
Russel Darlington (Sneath Common)	Grazing Permittee	
James and Marla Drga (Sneath Common)	Grazing Permittee	
Highland Livestock Co. (Dog Creek)	Grazing Permittee	
Lone Tree Cattle Co. (Gallatin Rapids)	Grazing Permittee	

List of Preparers

Table 4.2. List of Preparers

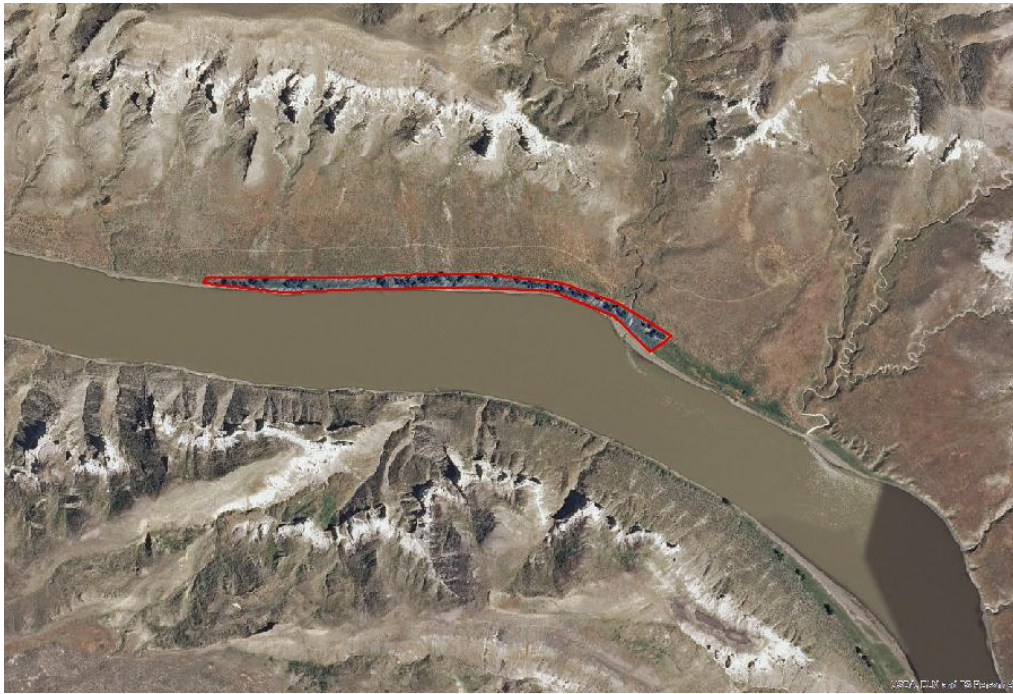
Name (and agency, if other than BLM)	Title	Responsible for the Following Section(s) of this Document
Chad Krause	Hydrologist	Project Lead/Riparian-wetland/Water Resources
Tom Darrington	Rangeland Management Specialist	Upland Vegetation and Livestock Grazing Management
Mark Schaefer	Outdoor Recreation Planner	Recreation, Visual Resource Management, Wild and Scenic Rivers
Zane Fulbright	Archeologist	Cultural Resources, National Historic Trails
Jody Peters	Wildlife Biologist	Wildlife Habitat
Kenny Keever	Natural Resource Specialist – Weeds	Invasive Species

References

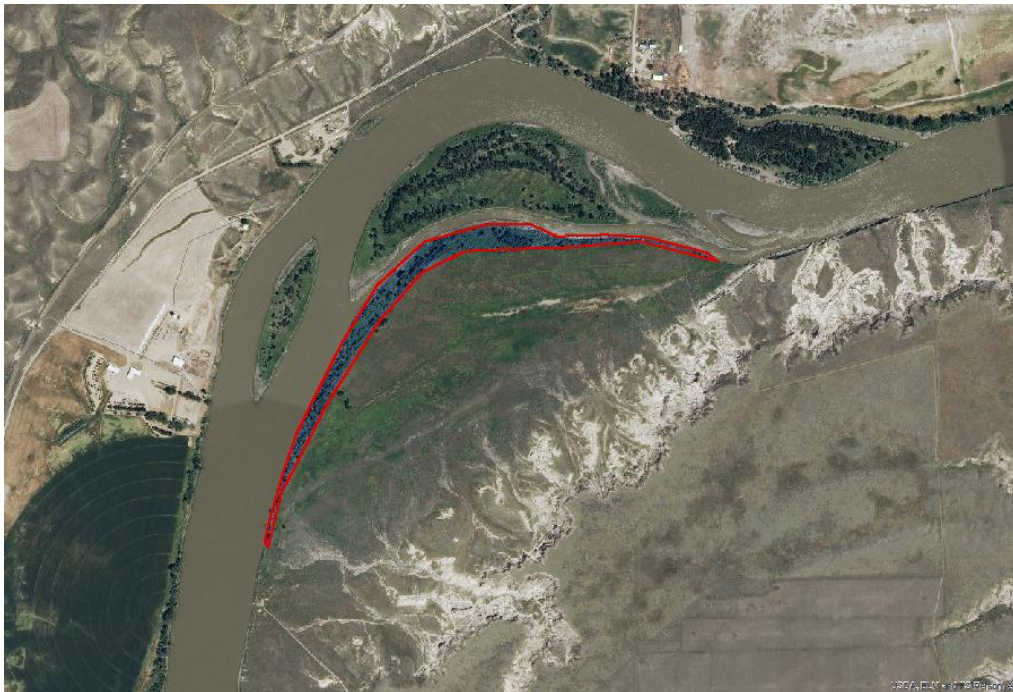
Eckerle, William, Stephen A. Aaberg, Marissa Taddie, and Sasha Taddie
2006 Upper Missouri Breaks Cultural Resource and Geoarchaeological
Assessment and Modeling Project: Choteau, Fergus, Phillips, and Blaine
Counties, Montana. Report prepared for Montana State Office and
Lewistown Field Office, Bureau of Land Management.

Appendix A (Planting Site Maps).

Dark Butte Site



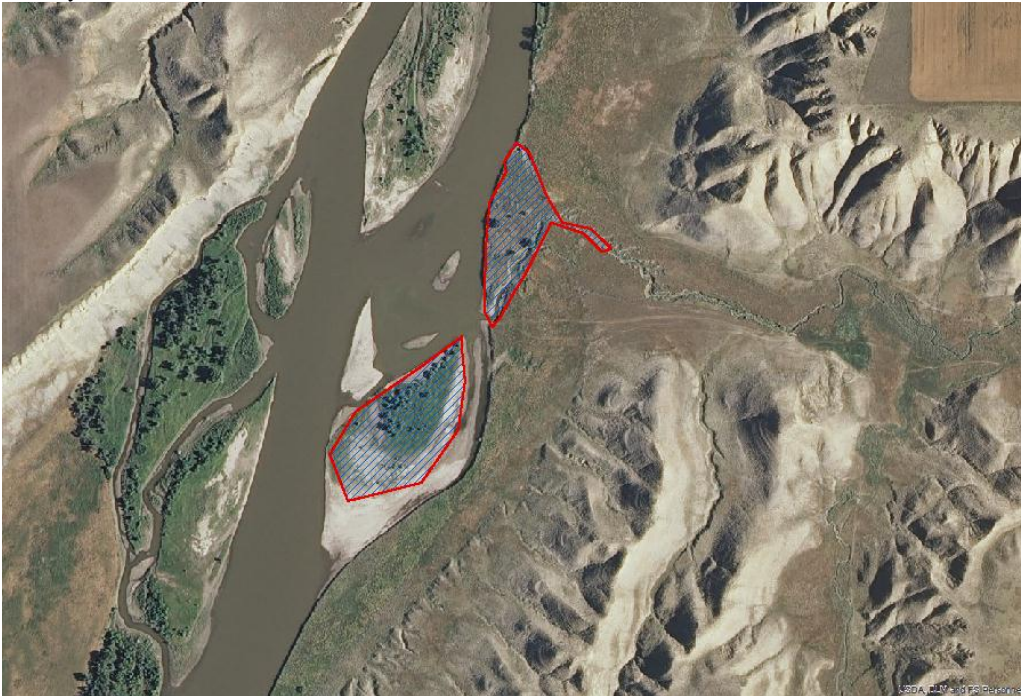
Anderson Site



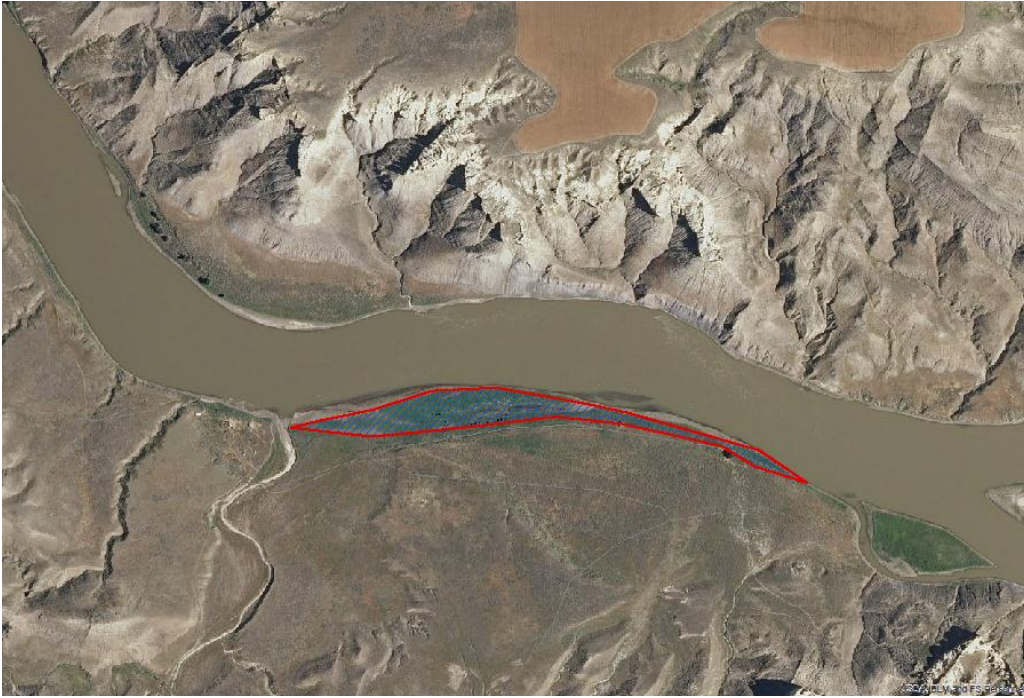
Slaughter River Site



Bailey/Hazlewood Site



Hole-in-the-Wall Site (note: the map has not been adjusted to reflect the proposal to include the planting of trees at the campground, which is just west of the polygon shown below)



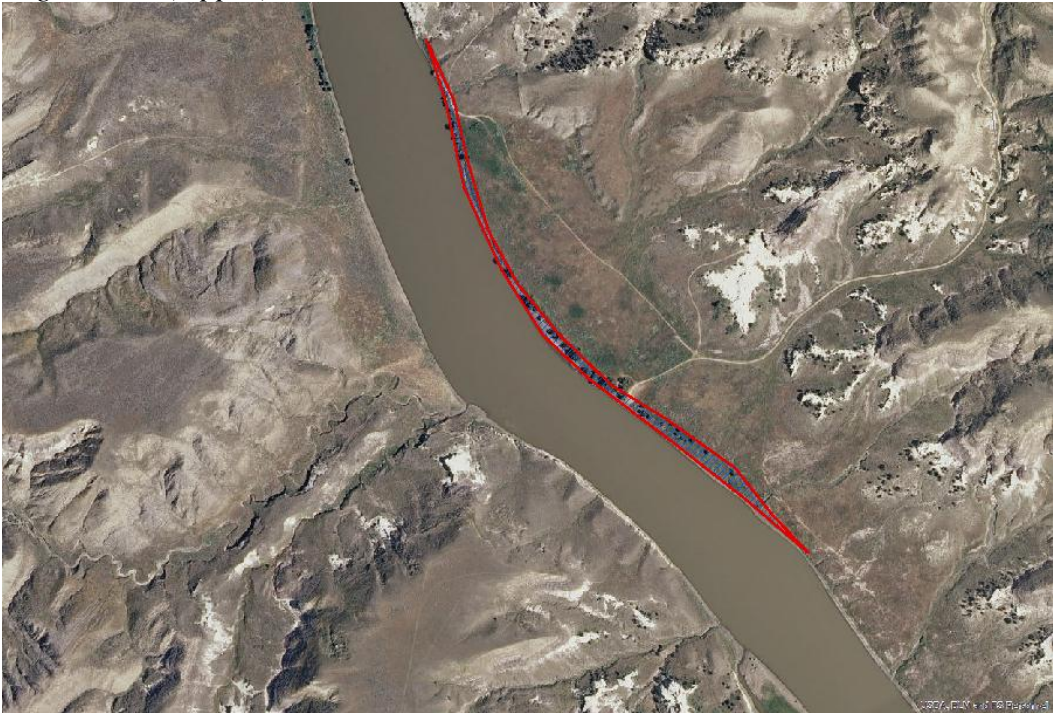
Eagle Creek (Lower) Site



Little Sandy Site



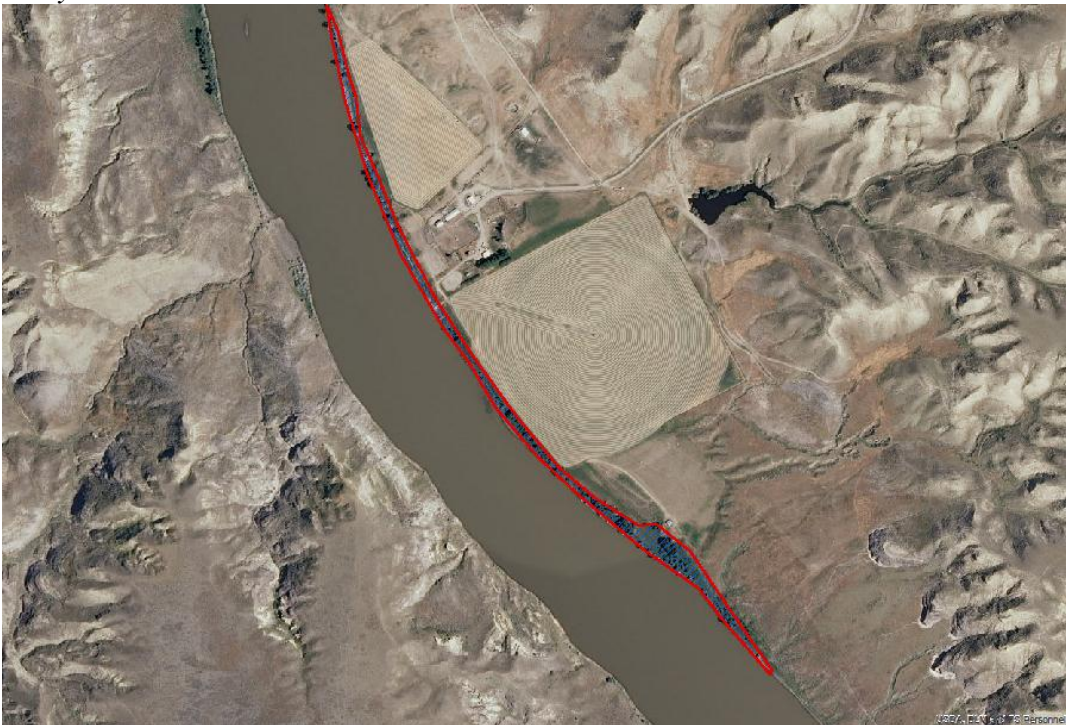
Eagle Creek (Upper) Site



Pablo Site



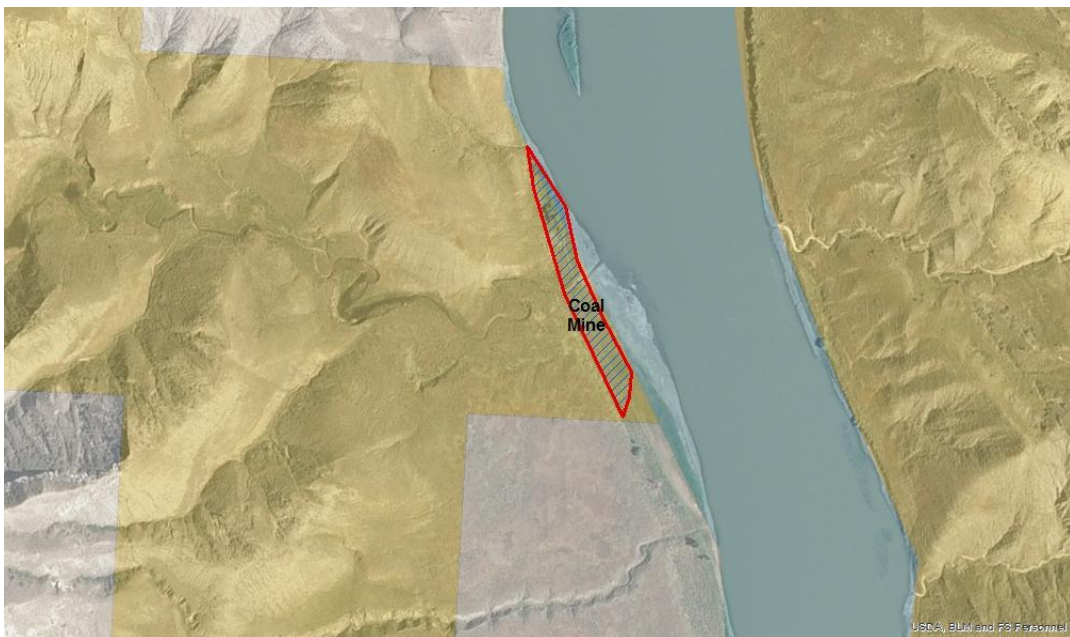
Terry Site



Judith Landing Site



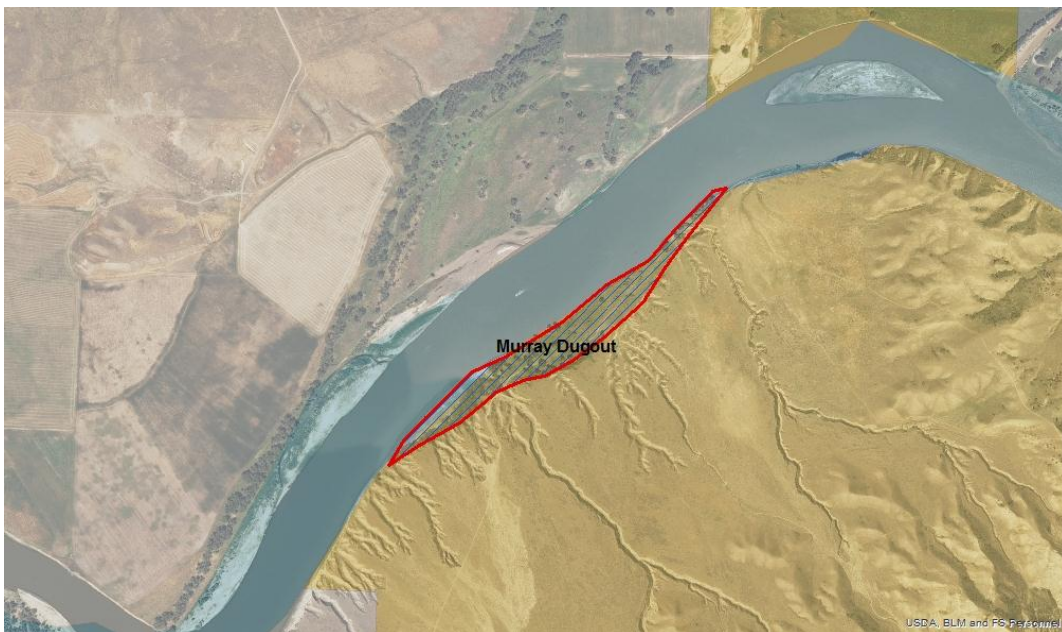
Coal Mine Site



Boiler Bottom Site



Boiler Bottom Site



Murray Dugout Site

